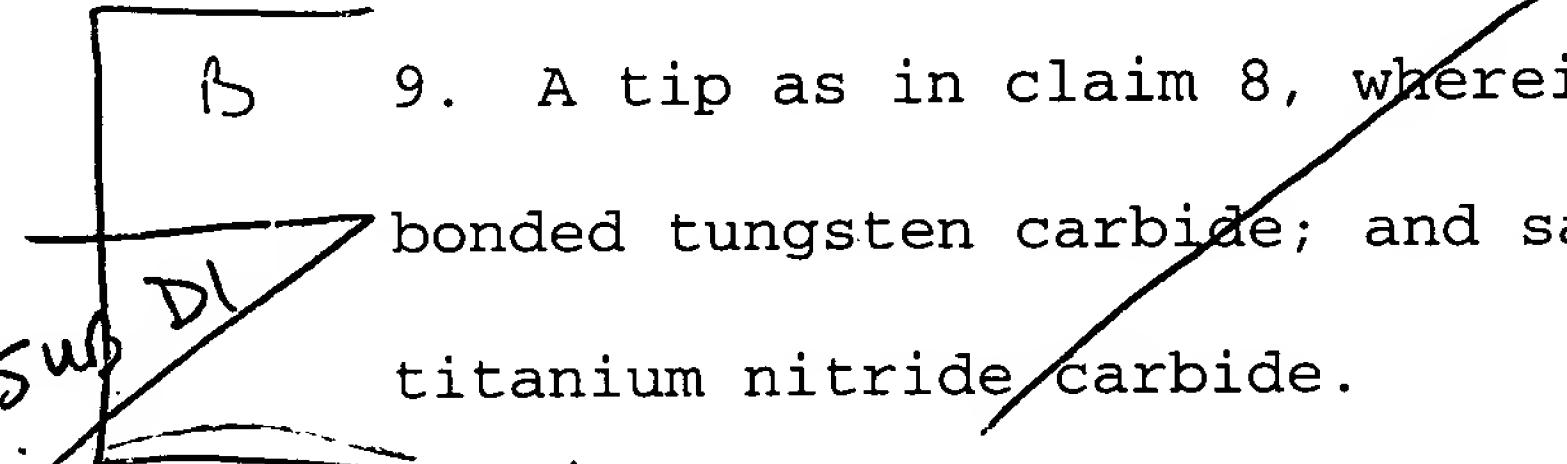


What is claimed is:

1. A tip having a dissipative material for use in wire bonding machines for connecting leads on integrated circuit bonding pads, wherein said dissipative material has a resistance low enough to prevent a discharge of charge to a device being bonded and high enough to avoid current flow large enough to ~~damaging~~ ^{damage} said device being bonded.
2. A tip as in claim 1, having a resistance in the range of 10^5 to 10^{12} ohms.
3. A tip as in claim 1, having a high enough stiffness to resist bending when hot and a high enough abrasiveness so as to function for at least two uses.
4. A tip as in claim 1, wherein said material is an extrinsic semiconducting material which has dopant atoms in the appropriate concentration and valence states to produce said resistance.
5. A tip as in claim 4 wherein said material comprises a polycrystalline silicon carbide uniformly doped with boron.
6. A tip as in claim 1 wherein said dissipative material comprises a doped semiconductor formed on an insulating core.

7. A tip as in claim 6, wherein said insulating core is diamond and said doped semiconductor is an outer surface of said diamond that is ion implanted with boron.

8. A tip as in claim 1 wherein said material is a doped semiconductor formed on a conducting core.


9. A tip as in claim 8, wherein said ~~conductor~~ ^{conducting core} is cobalt bonded tungsten carbide; and said doped semiconductor is titanium nitride carbide.

10. A dissipative ceramic for use in capillary wedge-type wire bonding machines for connecting leads on integrated circuit bonding pads, wherein said dissipative ceramic is electrically dissipative.

11. The dissipative ceramic of Claim 10, wherein said electrically dissipative ceramic comprises alumina (Al_2O_3).

12. The dissipative ceramic of Claim 10, comprising zirconia (ZrO_2).

13. The dissipative ceramic of Claim 10, comprising alumina (Al_2O_3) and zirconia (ZrO_2).

14. The dissipative ceramic of Claim 13, wherein the range of alumina is from 15% to 85% and the range of zirconia is from 15% to 85%.

15. The dissipative ceramic of Claim 13, having 40 percent alumina and 60 percent zirconia with other additives.

16. A dissipative ceramic comprising aluminum oxide (A_2O_3) and zirconium oxide (ZrO_2).

17. The dissipative ceramic of Claim 16, wherein the range of aluminum oxide is from 15% to 85% and the range of zirconium oxide is from 15% to 85%.

18. The dissipative ceramic of Claim 16, having of about 40 percent aluminum oxide and about 60 percent zirconium with other additives.

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